



Docket No.: SON-1659/CON  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re Patent Application of:  
Takashi Hirakawa et al.

Application No.: 10/811,246

Confirmation No.: 9013

Filed: March 29, 2004

Art Unit: 2629

For: LIQUID-CRYSTAL DISPLAY APPARATUS  
AND THREE-PANEL LIQUID-CRYSTAL  
DISPLAY PROJECTOR

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Examiner: C. E. Leiby

**REPLY BRIEF**

MS Appeal Brief - Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Madam:

This is a Reply Brief under 37 C.F.R. §41.41 in response to the Examiner's Answer mailed on November 12, 2008.

All arguments presented within the Appeal Brief of September 12, 2008 are incorporated herein by reference. Additional arguments are provided hereinbelow.

Claims 11-16 are currently pending in this application. No claims have been allowed.

Among others, the following positions were presented in the Examiner's Answer, each of which will be addressed in turn in this Reply Brief:

**ARGUMENT**

**Claims 11-15** - Claims 12-15 are dependent upon claim 11.

<b><u>Claim 11</u></b> is drawn to a liquid-crystal display apparatus comprising:	
a common voltage adjustment circuit (39) adapted to adjust a common voltage (Vcom);	Specification at page 10, lines 2-8
a chrominance non-uniformity correction circuit (21) adapted to generate a chrominance non-uniformity correction signal, said chrominance non-uniformity correction signal being superimposable onto said common voltage (Vcom) or said primary color video signal;	Specification at page 12, line 23 to page 13, line 5
a display panel (1R, 1G, 1B) adapted to receive said common voltage (Vcom) and a primary color video signal, a difference between said common voltage (Vcom) and said primary color video signal being applied to said display panel (1R, 1G, 1B).	Specification at page 10, lines 10-15

**U.S. Patent No. 5,260,797 to (Muraji)** - The Examiner's Answer contends that the reference Muraji discloses a common voltage circuit (32 or 93, 96, 101) for a common voltage (Examiner's Answer at page 4).

The Examiner's Answer further contends that the reference Muraji discloses several corrected video signals **FIGURES 7C-7E** with a common electrode 43 shown in **FIGURE 5** (Examiner's Answer at page 7).

In response, Figure 5 of Muraji is a block diagram of portions of an active matrix type liquid crystal display device used as an example of an image display device (Muraji at column 3, lines 7-9).

Conversely, Figure 6 of Muraji is a block diagram of portions of a projection type image display apparatus in accordance with a second embodiment of the present invention (Muraji at column 3, lines 10-12). Figures 7(a)-7(e) of Muraji are diagrams showing the relationship between the illumination distribution and the driving signal of a projected image in accordance with the second embodiment of the present invention (Muraji at column 3, lines 13-16).

However, the Examiner's Answer fails to show that the active matrix type liquid crystal display device shown within Figure 5 of Muraji and the projection type image display apparatus of the second embodiment shown within Figure 6 of Muraji are one in the same.

Regarding the second embodiment, a specified voltage is supplied to the common electrode of the image display devices 59, 60, and 61 by common voltage generator circuits 93, 97, and 101 (Muraji at column 7, lines 44-47).

Muraji arguably teaches that the signal voltage for driving the image display device 59 at this time is indicated by dotted line SRa in FIG. 7 (c), and the signal voltage for driving the image display device 60 is indicated by solid line SG in FIG. 7 (d), and the signal voltage for driving the image display device 61 is indicated by the broken line SBa in FIG. 7 (e) (Muraji at column 6, lines 44-50).

Accordingly, by designing the signal voltage for driving the image display device 59 as indicated by solid line SRb in FIG. 7 (c), that is, by setting the signal voltage for driving the left side of the screen lower than the signal voltage of driving the right side of the screen, the illumination characteristic Br in FIG. 7 (b) may be made equal to Bg (Muraji at column 6, lines 50-56).

Besides, by setting the signal voltage for driving the image display device 61 as shown by solid line SBb in FIG. 7 (e), that is, the signal voltage for driving the right side of the screen lower than the signal voltage for driving the left side of the screen, the illumination characteristic Bb in FIG. 7 (b) may be made equal to Bg (Muraji at column 6, lines 56-62).

The correction of video signal as described above is realized by a circuit composition as shown in FIG. 8 (Muraji at column 6, lines 67-68).

A specified voltage is supplied to the common electrode of the image display devices 59, 60, and 61 by common voltage generator circuits 93, 97, and 101 (Muraji at column 7, lines 44-47).

However, Muraji fails to teach a difference between the specified voltage and any signal voltage (SR, SG, SB) as being applied to a common electrode.

To account for this deficiency within Muraji, the Examiner's Answer asserts that any voltage can be seen as a difference between itself and the common electrode, ground for instance, wherein the difference would be just the voltage itself (Examiner's Answer at page 7).

In response, claim 11 of the present application includes a common voltage adjustment circuit (39) adapted to adjust a common voltage (Vcom).

A specified voltage is supplied to the common electrode of the image display devices 59, 60, and 61 by common voltage generator circuits 93, 97, and 101 (Muraji at column 7, lines 44-47).

However, the Examiner's Answer fails to show any of the common voltage generator circuits 32, 93, 97, or 101 as being adapted to adjust "ground for instance".

Additionally, the Examiner's Answer fails to show that the difference between the specified voltage supplied to the common electrode and any signal voltage (SR, SG, SB) would be just the signal voltage (SR, SG, SB) itself.

**U.S. Patent No. 4,319,237 (Matsuo)** - The Appeal Brief asserts that Matsuo fails to disclose, teach, or suggest the presence of a chrominance non-uniformity correction signal (Appeal Brief at page 10).

However, no rebuttal to this assertion can be found within the Examiner's Answer.

**Claims 16** - Claim 16 is dependent upon claim 11.

<b><u>Claim 16</u></b> is drawn to a liquid-crystal display apparatus according to claim 11, wherein said chrominance non-uniformity correction signal is superimposed onto said common voltage (Vcom).	Specification at page 10, lines 10-15
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The Examiner's Answer apparently contends that the arguments found within Appeal Brief regarding claim 16 are moot since the features found within claim 16 was regarded as new matter and not added in an after final amendment (Examiner's Answer at page 7).

In response, claim 16 was added by the Amendment in Response to Non-Final Office Action filed on November 19, 2007.

No new matter rejection of claim 16 can be found within the Final Office Action of February 20, 2008. Accordingly, the first instance of this new matter rejection of claim 16 set forth within the Examiner's Answer appears to be a new ground of rejection.

However, the Abstract for the specification as originally filed provides that *in a liquid-crystal display apparatus with a primary color video signal and a common voltage supplied to a liquid-crystal display panel, a correction signal for canceling the chrominance non-uniformity is superimposed on the primary color video signal.*

To remove the chrominance non-uniformity, a voltage change for cancelling the chrominance non-uniformity is applied to the red, green, and blue video signals or to the common voltage VCOM (Specification at Figure 4, page 10, lines 12-15).

Thus, the requirements of 35 U.S.C. §112, first paragraph, have been realized within the above-identified application.

The Appeal Brief asserts that U.S. Patent No. 6,009,236 to (Mishima), U.S. Patent No. 4,319,237 (Matsuo), and U.S. Patent No. 5,831,709 (Song) fail to disclose, teach, or suggest a liquid-crystal display apparatus wherein said chrominance non-uniformity correction signal is superimposed onto said common voltage (Appeal Brief at pages 8-11).

However, no rebuttal to this assertion can be found within the Examiner's Answer.

### CONCLUSION

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance.

The prior art of record fails to disclose, teach or suggest all the features of the claimed invention.

For at least the reasons set forth hereinabove, the rejection of the claimed invention should not be sustained.

Therefore, a reversal of the rejection of May 17, 2008 is respectfully requested.

Dated: November 21, 2008

Respectfully submitted,

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